DETAILED ACTION

1. The Art Unit location and the examiner of your application in the PTO has changed.
To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1644.

2. Applicant's amendment, filed 10/03/2008, has been entered.

Claims 1-11 have been canceled.

Claim16 has been amended.

Claims 12-25 are pending.

3. Applicant's election without traverse of Group III, wherein the inhibitor of CSF-1 activity is an antibody in the Amendment and Response to the Office Action (mailed September 3, 2008), filed 10/03/2008 is acknowledged.

In addition, applicant's election of Crohn's disease is acknowledged.

However, in the interest of compact prosecution and given that inflammatory bowel disease encompasses both ulcerative colitis and Crohn's disease,
the election of species has been extended to encompass both ulcerative colitis and Crohn's disease in the interest of compact prosecution.

4. While applicant's election of another IBD-therapeutic agent in response to the previous Office Action, mailed 09/03/2008;
the current examiner has set forth the following election of species.

If applicant elects Groups I/II/III,
applicant is required to elect a species from the following.

This application contains claims directed to the following patentably distinct species of the claimed Groups I/II/III:
wherein the method for the treatment and/or prophylaxis of inflammatory bowel disease comprises:

A) an inhibitor of CSF-1 activity without another anti-IBD therapeutic agent or an anti-cancer agent,
B) an inhibitor of CSF-1 activity with another anti-IBD therapeutic agent,
C) an inhibitor of CSF-1 activity with an anti-cancer agent, OR
D) an inhibitor of CSF-1 activity with more than one therapeutically active compounds agents.

If applicant elects (B), (C) or (D), then applicant is required to select an ultimate species of the appropriate agent.

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

These species or agents are distinct because their structures, physicochemical properties and modes of action differ action to such an extent and require non-coextensive searches to such an extent that they are considered patentable distinct. Further, these molecules or agents do not share a substantial structural feature essential to a common utility do not have common structure to a common utility. Therefore, they are separate and patentably distinct species.

In addition, the species of methods require different products, process steps and endpoints based upon distinct agents addressed herein.

Applicant is required under 35 U.S.C. § 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 12 is generic, for example.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

5. Applicant is advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. M.P.E.P. § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

6. During a telephone conversation with Sandra Weiss on 11/26/2008, a provisional election was made with traverse to select the species of (A) an inhibitor of CSF-1 activity without another anti-IBD therapeutic agent or an anti-cancer agent.

Affirmation of this election must be made by applicant in responding to this Office Action.

7. Claims 12, 15-19 and 21-22 are under consideration as they read on treating inflammatory bowel disease (e.g., ulcerative colitis and Crohn's disease) with anti-CSF-1 antibody (i.e., anti-M-CSF antibody) as they read on the elected invention and species.

Claims 12-14, 20 and 23-25 have been withdrawn from further consideration by the examiner as being drawn to a nonelected inventions and/or species.

8. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Applicant should restrict the title to the claimed invention.

9. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING. (See MPEP § 2424 and 37 CFR 1.821- 1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc.)

Applicant is invited to amend the specification to comport to these guidelines.

10. The application is required to be reviewed and all spelling, TRADEMARKS, and like errors corrected.

Trademarks should be capitalized or accompanied by the ® or ™ symbol wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the trademarks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate corrections are required

11. The effective filing date of the instant claims is deemed to be the filing date of the priority application United Kingdom 0325836.5, filed 11/05/2003.

12. Claims 15-19 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) Claims 15-19 are indefinite in the recitation of "or a functionally active antibody or derivative" as well as "epitope binding fragment" because the claims are ambiguous.

It appears that the "functionally active antibody" and "epitope binding fragment" are intended to read on "CSF-1 antigen binding fragments thereof". However, the claims currently read on any "functionally active antibody or fragment thereof", including immunologically relevant fragments such as Fc fragments.

It appears that "derivative" is intended to read on the polymers disclosed on pages 10-11 of the instant specification, and not on "derivatives" as they might read on modifying antigen specificity of the claimed antibodies.

Applicant is invited to amend the claims to clearly recite the intended "antigen-binding fragments" and to clarify the metes and bounds of the intended "derivatives".

B) Claim 17, line is objected to because "F(ab').sub2" should be F(ab')$_2$" as the proper designation.

C) Applicant is reminded that the amendment must point to a basis in the specification so as not to add any new matter. See MPEP 714.02 and 2163.06.

13. The following is a quotation of the first paragraph of 35 U.S.C. § 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claim 12, 15-19 and 21-22 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In vitro and animal model studies have not correlated well with in vivo clinical trial results in patients. Since the therapeutic indices of immunosuppressive drugs or biopharmaceutical drugs can be species- and model-dependent, it is not clear that reliance on the in vitro and in vivo experimental observations as well as the clinical experience with targeting various inflammatory conditions with CSF-1-specific antibodies accurately reflects the relative ability or efficacy of the claimed methods to prophylactically treat inflammatory bowel diseases, as it reads on preventing said inflammatory bowel diseases.

For example, the fundamental causes of Crohn's disease and ulcerative colitis are unknown.

Pharmaceutical therapies in the absence of in vivo clinical data are unpredictable for the following reasons; (1) the protein may be inactivated before producing an effect, i.e. such as proteolytic degradation, immunological inactivation or due to an inherently short half-life of the protein; (2) the protein may not reach the target area because, i.e. the protein may not be able to cross the mucosa or the protein may be adsorbed by fluids, cells and tissues where the protein has no effect; and (3) other functional properties, known or unknown, may make the protein unsuitable for in vivo therapeutic use, i.e. such as adverse side effects prohibitive to the use of such treatment. See page 1338, footnote 7 of Ex parte Aggarwal, 23 USPQ2d 1334 (PTO Bd. Pat App. & Inter. 1992).

The specification does not adequately teach how to effectively prophylactically treat or prevent inflammatory bowel disease in humans by administering CSF-1-specific antibodies. The specification does not teach how to extrapolate data obtained from various in vitro or in vivo observations with CSF-1-specific antibodies to the development of effective methods of prophylactically treating or preventing inflammatory diseases broadly encompassed by the claimed invention.

Also, it is noted that experimental protocols usually are conducted under defined conditions wherein the antagonist and the stimulus / insult occur at the same or nearly the same time. Immunosuppression is much easier to achieve under such controlled conditions that experienced in inflammatory bowel diseases targeted by the claimed invention. With respect to in vivo studies, animal models validate concepts based on studies of human disease, such studies are limited to the "acute" as opposed to "chronic" nature of the disease. In animal models, the onset of inflammation is rapid with an aggressive destructive process, whereas in humans the disease progresses more slowly, often with natural periods of disease exacerbation and remission. Generally, such diseases are diagnosed only after significant tissue damage has occurred.

There is insufficient guidance and direction as well as objective evidence to provide for prophylactically treating preventing the diversity and scope of diseases encompassed by the claimed methods.

In view of the lack of predictability of the art to which the invention pertains the lack of established clinical protocols for effective methods to prophylactically treating or preventing inflammatory bowel diseases with CSF-1-specific antibody-based therapies, undue experimentation would be required to practice the claimed methods of prophylactically treating or preventing inflammatory bowel diseases with a reasonable expectation of success, absent a specific and detailed description in applicant's specification of how to effectively practice the claimed methods and absent working examples providing evidence which is reasonably predictive that the claimed methods are effective for prophylactically treating or preventing the diseases or disorders encompassed by the claimed methods and products.

Applicant is invited to amend the claims to avoid the recitation of "prophylaxis".

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. For examination purposes, it is noted the colony stimulating factor 1 (CSF-1), also known as macrophage colony stimulating factor (M-CSF) is a cytokine produced by a variety of cells, including macrophages, endothelial cells and fibroblasts.
See page 1, paragraph 2 of the instant specification.

17. Claims 12, 15-19 and 21-22 are rejected under 35 U.S.C. § 102(e) as being anticipated by over Bedian et al. (US 2005/0059113) (see entire document)
and as further evidence that CSF-1 is also known as M-CSF at the time the invention was made, as acknowledged on page 1, paragraph 2 of the instant specification.

Bedian et al. teach methods of treating various conditions encompassing inflammatory bowel disease, Crohn's disease and ulcerative colitis (e.g., see paragraph [0249]), with anti-M-CSF antibodies, including antibody fragments (e.g., see paragraphs [0098] – [0102], [0180], 0222] – [0223], [0236]-[0237]), therapeutic conjugates thereof (e.g., see paragraphs [0127] – [0128], [0241] – [0246]) and biocompatible polymers thereof (e.g., derivatives; e.g., see paragraph [0255]) (see paragraphs [0098] - [0246], [0247] –[0263]).

18. No claim is allowed.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Gambel whose telephone number is (571) 272-0844. The examiner can normally be reached Monday through Thursday from 7:30 am to 6:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen O'Hara can be reached on (571) 272-0878.
The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 1644
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